

## ABSTRACT

A magneto-resistive element includes: a metal artificial lattice film (4) in which a magnetic thin film and a non-magnetic metal thin film are alternately laminated in at least two layers on a part of a substrate (1) and formed into a predetermined pattern; a first protective layer (5) covering the metal artificial lattice film (4); and a second protective layer (6) formed on the first protective layer (5). The residual stress of the first protective layer (5) is substantially zero. The second protective layer (6) is made of a material rejecting water. This structure can achieve a magneto-resistive element that has no hysteresis and small deterioration of the characteristics even at high temperatures, and has excellent heat resistance and corrosion resistance. Thus, this element can be used in sever environments, such as in an automobile.